DOCUMENT RESUME

ED 049 296 TM 000 483

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TITLE Attitude Changes on the College Student Questionnaires: A Study of Students Enrolled in Predominantly Black Colleges and Universities.
PUB DATE Feb 71
NOTE 33p.; Paper presented at the Annual Meeting of the American Educational Research Association, New York, New York, February 1971

EDRS PRICE EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS Attitude Tests, *Changing Attitudes, *College Students, Cultural Enrichment, Educational Experience, Educational Needs, Enrichment Experience, Longitudinal Studies, *Negro Attitudes, Negro Colleges, *Negro Students, *Student Attitudes
IDENTIFIERS *College Student Questionnaire, CSQ

ABSTRACT

The nature and extent of attitude change concomitant with experiences of students attending five predominantly black colleges was investigated in a longitudinal study employing the College Student Questionnaire. The questionnaire was administered to students upon entrance to college and readministered upon completion of one year of college. The responses of 1520 students were obtained. Results indicated that students showed general increases in Cultural Sophistication, some increases in Family Independence, Peer Independence, and Liberalism. Increases in Cultural Sophistication were greater for students with higher extracurricular involvements and closer relationships with faculty members. The College Student Questionnaire holds certain potential advantages for studying attitudes, but it also holds some limitations when used with black students. Substantive findings suggest that extracurricular experiences and close relationships with faculty members may lead to greater gains in cultural sophistication viewed as an attitude. (Author/PR)

ED049296

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Attitude Changes on the College Student Questionnaires: A Study of Students Enrolled in Predominantly Black Colleges and Universities

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The challenge to predominantly black colleges is unique among American higher educational institutions. Students entering these colleges have generally grown up in poverty stricken rural environs which have provided them with a limited variety of cultural experiences. In addition, as a result of the inadequate educational backgrounds they have typically received, many of the entering students could not meet the conventional admissions requirements of most predominantly white schools. Thus, most students enter the predominantly black school with manifest needs for financial aid, for remedial training, and for culturally enriching experiences, not to mention their ultimate goal of a college education that will qualify them for the professions and careers of their choice. The formidable challenge of providing experiences to fulfill their needs and goals must be faced by predominantly black colleges, which must meet the challenge in spite of their limited financial, physical, and human resources.

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The general nature of this challenge is certainly recognized and understood by most students, faculty members, and administrators in these colleges. On the basis of personal experience, judgment, intuition, and wisdom of individual faculty members and administrators, pragmatic educational programs and strategies have been developed to fulfill many of the pressing needs. However, the importance of personal judgment and experience notwithstanding, there does remain a real need at predominantly black schools for objective evaluation and research concerning the effectiveness and impact of their educational programs. Evaluation can provide a primary impetus to educational improvement when new programs are needed or when existing programs need modification. Also, research can provide a basis for more

complete and basic understanding of the black students' needs and accomplishments, as well as the educational programs of the schools.

There has been a considerable amount of research and evaluation concerning the educational aptitude and achievement of black college students. But most of the studies have been limited in scope by their basic concern with finding differences between blacks and whites. Many evaluation studies have been designed simply to compare a group of black students with a predominantly white group or normative standard on one measure or another. While such studies almost always reveal differences between black students and their white counterparts, the studies rarely provide information or insight concerning the reasons for the differences. Hence, important questions of causation and other basic matters are left to conjecture and highly speculative theory.

As an alternative to the norm-comparison method for educational research and evaluation involving black students, the authors propose that a longitudinal-developmental method offers important advantages. This method involves initial measurement of characteristics of students as they enter school. All subsequent measures of achievement, attitudes, and other characteristics can be related to these initial measures. Measures repeated over time perhaps hold the greatest potential for studying learning, attitude change, and other impacts of college upon students. Such an approach is especially valuable for studies of black students, since so little is understood concerning the experiences, backgrounds, and characteristics of these students as they enter college, not to mention the changes that take place during college.

In spite of widely recognized advantages of the longitudinal method, there have been few longitudinal studies of the attitudinal development of college students, and even fewer such studies of students attending predominantly black colleges. Indeed, examination of several handbooks, review articles, and other sources revealed no such studies.

Perhaps the most important reason for the paucity of prior research of this type involves the lack of broad, standardized, and widely recognized instruments for measuring attitudes of college students. While there is a plethora of attitude measures in education, psychology, and sociology, until recently there has not been a battery of scales or items designed primarily to correspond with the kinds of educational goals and outcomes that are traditionally associated with college education. Indeed, the financial, technological, and other resource requirements for development and standardization of such a broad instrument place the task beyond the scope and interests of most researchers.

Recent development of the College Student Questionnaires (CSQ) within the Institutional Research Program for Higher Education (IRPHE) of Educational Testing Service has facilitated research on attitudes and attitude changes among college students. From a practical standpoint, the instrument is easy to administer and scoring services are provided at a reasonable cost. From a methodological standpoint, the instrument lends itself to longitudinal research because a number of attitude scales from CSQ 1 (for entering freshmen) are also included in CSQ 2 (for advanced students). Moreover, the standardization of the instrument encourages cross-institutional studies, wherein measures of attitudes and/or attitude changes at one institution may be compared with corresponding measures at other institutions.

The usefulness of CSQ for psychological and educational research remains open to question, however, especially for research at predominantly black institutions. Are the items and scales reliable and valid for black students? Are the attitude scales germane to college experiences, especially the experiences of black students? Are the scales sensitive to changes that might be expected to occur during college? Evaluation of the CSQ in relation to questions such as these is essential because the developmental studies and norms for the instrument were based upon predominantly white samples, and additionally, because the instrument is being widely used at predominantly black colleges.

Over and above these methodological questions, this study was also fundamentally concerned with certain substantive issues. First, the study was designed to determine the actual nature and extent of attitude changes among students attending predominantly black colleges and universities. Five general attitude areas were considered: Family Independence, Peer Independence, Liberalism, Social Conscience, and Cultural Sophistication. The investigators hypothesized that increases in the strength of each of these attitudes would be associated with one or two years of college attendance. In addition, specific attitudinal responses comprising these general areas were each examined independently and in relation to one another. No hypotheses were offered concerning changes among the specific attitudinal responses. The changes within each of the general and specific attitudes were examined by comparing the questionnaire responses of students as they entered college with their responses after one or two years of college.

A second substantive issue concerned identification of variables that related to the extent of attitude change. The analyses concerning this issue were exploratory, and no specific hypotheses were formulated prior to the study. Attitude changes were compared among institutions and between males and females. In addition, the study examined possible relationships of a variety of personal and secondary background factors with changes in certain attitudes. Finally, the study also considered possible relationships between participation in various college activities and experiences with changes in certain attitudes.

It should be pointed out that the substantive issues raised in the study could not be resolved unless the prior methodological questions were answered satisfactorily. In other words, the substantive questions concerning attitude change could be answered only if the attitude measures proved methodologically sound and applicable to situations involving black students. Nevertheless, it is just as true that answers to some of the substantive questions could contribute to resolution of the methodological questions. Therefore the investigation proceded on the assumption

that study of attitude measurement and attitude change at predominantly black colleges would provide partial answers, at least, to all of the questions that have been raised.

METHOD

Subjects

The initial sample consisted of 2,482 entering freshmen at five predominantly black colleges and universities located in several cities in the southeastern United States. All of the schools offered liberal arts degrees as well as programs leading to teacher certification. College A was the only school that also offered graduate and/or professional training. Colleges A and D were state supported, Colleges B, C, and E church related and privately supported. College E was an all girls school; the other schools were coeducational, although females outnumbered males at all of these schools. At the time of the study, the total enrollment of College A was approximately 3,000; the enrollments of B, C, and D were approximately 1,000 each; the enrollments of College E, approximately 600.

CSQ 1 was administered to all entering freshmen at College A in Autumn, 1968. The instrument was administered to samples drawn from the freshmen classes at the other institutions in Autumn, 1967. Colleges A, B, C, and D administered CSQ 2 to the same groups of students near the end of the spring semester, i.e. towards the end of the freshman year. Therefore the administration intervals at these schools were approximately the same. College E, the all-girls college, administered CSQ 2 at the end of the sophomore year. For the total sample, CSQ 2 was completed by 1,520 of the 2,482 students who had completed CSQ 1. The final sample included 489 males and 1,031 females. The Ns for some of the analyses were smaller due to missing data items, causing additional Ss to be excluded from certain analyses.

The Attitude Scales

The general attitude areas under consideration in this study included Family Independence (FI), Peer Independence (PI), Liberalism (L), Social Conscience (SC),

and Cultural Sophistication (CS). The conceptualization and measurement of these attitudes was based upon the research of Peterson (1968) and his colleagues. The premeasures of the attitudes were based upon the responses to 50 Likert-Type items in CSQ 1. The post-measures of the attitudes were based upon responses to identical items repeated in CSQ 2. Also included in certain analyses were selected items from the "Secondary School" and "Family Background" sections of CSQ 1 and from the "College Activities" section of CSQ 2.

RESULTS AND DISCUSSION

Internal Consistency of the Attitude Scales

Table 1 presents the alpha reliability coefficients (Cronbach, 1951) for the five attitude scales. The coefficients were based upon responses to CSQ 1. The coefficients, which indicate the internal consistency of the scales, range from a low level for the L Scale to a moderate level for the FI, PI, SC, and CS Scales. Comparisons of the coefficients with those based upon predominantly white samples as reported in the CSQ Technical Manual (Peterson, 1968) reveal that the corresponding values are similar, except in the instance of the L Scale. Although the coefficient reported in the Manual for the L Scale (r = .57) was one of the lowest of the reliabilities among the scales, the value was even lower within the present sample.

To further evaluate the structure of the attitude scales, the responses to the 50 CSQ 1 items comprising the attitude scales were intercorrelated and factor analyzed. The analyses, which are not presented in this report, were performed separately for males and females. Among the 18 factors which were rotated, several were interpretable directly in relation to the attitude scales as constructed on CSQ.

The FI Scale was reflected on factors which included eight of the FI Scale items for males, and nine for females. Item 148, which concerns the frequency of contacts with the parental family, was the only FI item that clearly did not load on these factors. It appears that this item may reflect something other than the student's personal dependence or attachment to the family.

The items comprising the PI Scale formed two distinct factors for both males and females. Although the factors for males and females did not correspond exactly, one factor for each sex appeared to reflect the tendency to affiliate with friends or groups of peers and another factor appeared to reflect the extent of interest in the activities of friends, consideration of their opinions and reations, and to some extent, dependence upon their approval in decision making. Further analyses will be necessary to determine the composition, differentiation, and appropriate conceptualization of these factors, but it does appear that a distinction must be drawn between affiliative tendencies, on the one hand, and particular types of dependency and concern for friends and peers, on the other hand.

The items comprising the L Scale did not relate to one another to form any distinct factors for either male or females. Indeed, not more than two L items loaded on any given factor for males. Although one factor for females included as many as four L items, the loadings of these items were relatively low. The lack of emergence of any clear liberalism factor is not surprising in light of the low internal consistency of the L Scale.

The SC Scale was reflected in a factor for males comprised of six SC items, and a factor for females comprised of seven SC items. The items which were unrelated or weakly loaded on this factor were 174, which concerns "the rising tide of juvenile crime;" 181, concerning "elderly people . . . who live on crumbs;" 186, concerning the availability of obscene material to children; and 188, concerning the decision to drop the atomic bomb on Hiroshima.

All of the items from the CS Scale were included in general cultural sophistication factors for one or the other sexes. For males, eight CS items loaded on the factor, and for females six items loaded. There were no items that had loadings below .30 for both males and females, although several items did not load much higher than that for either sex.

Thus the factor analyses were in agreement with the implications of the alpha coefficients, indicating that the FI, PI, SC, and CS Scales were each formed of internally consistent and fairly coherent clusters of items, although the factor analytic results indicated that a few particular items did not relate to the other item on the given scales. Both types of analyses also were consistent in indicating that the items on the L Scale did not reflect a single dimension or variable. In other words, the responses of black students to the items comprising the L Scale do not appear to be structured in terms of a given general attitude.

The low to moderate internal consistency reliabilities for the attitude scales, particularly the low reliability of the L Scale, should be kept in mind in interpreting the subsequent analyses involving the scales. In general, it is to be expected that correlations of the pre- and post-scores on each of the scales, as well as correlations of other variables with each of the scales, will be attenuated to the extent that the respective scales are unreliable. Furthermore, one cannot regard differences between pre- and post-scores as indices of change if the pre- and post-scores are uncorrelated or weakly correlated.

The attenuating effect of the unreliability is manifest, for example, in the r's between the pre- and post-test scores presented in Table 2. By comparing Table 1 and Table 2, it may be noted that these r's are each slightly lower than the corresponding alpha coefficients.

General Attitude Changes Among the Total Groups

Table 3 presents the mean pre- and post-scores on the five attitude scales for the group of freshmen at the four coeducational institutions. Table 4 presents the scores for the group of sophomores at the all-girls school. One tailed tests were used to test the research hypotheses that overall gains would be observed on each of the five scales. For both groups the gain scores were statistically significant beyond the .01 level on the FI, PI, L, and CS Scales. The SC Scale did not reveal significant gains within either group.

Thus the findings from both groups supported the hypotheses that college attendance would be associated with increases in the general attitude areas: family independence, peer independence, liberalism, and cultural sophistication. On the other hand, these findings did not support the hypothesis that social conscience, viewed as a general attitude, increased during the periods the students attended the colleges.

With regard to the question concerning the extent of gain, it may be noted that the average gains on the Cultural Sophistication Scale by both groups were the greatest among the scales in terms of raw score units. The t values were also largest for these gains for both groups, indicating that the Cultural Sophistication gains were largest in terms of the ratio of variances of the gains to the total variances of the difference scores. Nevertheless, one should not conclude simply on this basis that cultural sophistication was increasing more than the other attitudes, because the score units on the five attitude scales are not directly comparable, because the five scales are not internally consistent to the same degree, and because the scope or generality of the changes within each attitude area are not taken into account in the overall gain scores on each scale.

Indeed, one means of determining the overall extent of changes in each general attitude, as well as determining more specifically the nature of the attitude changes, involves comparisons of the pre- and post-responses to each of the attitude items. Because of the large number of these comparisons, some statistically significant differences would ordinarily result from chance, so a probability level of .01 was established for rejecting the null hypothesis. Two-tailed tests were used because there was no prior basis for predicting the directions of the changes in each of the specific attitudinal items. The item changes were computed only for the larger group of the four coeducational colleges, because the N for this group was large and the estimated means and differences were hence more reliable. Comparisons between the pre- and post-scores on items that revealed significant gains are

presented in Table 5.

The results of these item by item comparisons for the Family Independence Scale indicate that five of the ten items showed slight but statistically significant increases, whereas one item (148), concerning the prospective (pre) versus retrospective (post) report of frequency of seeing parents, showed a decrease. This item, it will be recalled, did not load with the other items on the family independence factor, nor does it seem to correspond with changes in dependence or independence during the freshman year. On the other hand, the five items that show gains in the scores suggest that the students do see themselves as slightly more independent after one year of college than at the time they entered.

The results for the PI Scale indicate that only two of the ten items increased, whereas one decreased. The items which increased pertained to the students' independence of action and belief, and in this sense, independence does seem to increase slightly. By contrast, the item (166) which decreased, like the items which showed no significant changes, generally referred to the students' interestin affiliating with other students and with the students' considerateness of other students' opinions. Thus there may have been modest increases in independence of judgment, but no corresponding changes in general affiliative tendencies as reflected by the items on the PI Scale.

Five of the L Scale items revealed increases. There does not appear to be any apparent similarity or common meaning underlying these five items as distinguished from those which did not change, and it will be recalled that there was no general liberalism factor resulting from the factor analyses. While the changes in the five items do reflect slightly increased acceptance of beliefs that are generally considered "liberal," it is interesting to note that item 171, which asks the students whether they consider themselves to be liberal or conservative, revealed no significant changes between the students' initial responses upon entering college and their responses near the end of the freshman year.

Six of the SC items showed changes, but two of these items (181 and 186) decreased relative to their keyed directions on the SC Scale. It is interesting to note that neither of these two items loaded on the general social conscience factors obtained in the factor analyses. The decrease on item 186, concerning the respondents' reactions to children looking at obscene material (and perhaps the increases on items 176 and 179 of the Liberal Scale) may represent change in the direction of less restrictive, less punitive attitudes towards "deviant" behavior. The reason for the decrease in SC item 181, concerning welfare for the elderly, was not clear, although it should be noted that there was a very high pre-score on this item, and the post-score is still the highest among the Social Conscience items. The significant increases on four of the other SC items suggested that there were increases in specific aspects of social consciousness of the students. In particular, concern for the opportunities of minority groups increases. Students also report increased outrage in reaction to lynching. These changes are consistent with the apparent development of strong concerns for black people and black awareness in general. Only these few items on the SC Scale refer directly to the needs and concerns of black people and other minority groups. In other words, it appears that the social issues and problems which are of the most immediate concern to black students are represented only minimally on the SC and other attitude scales of the CSQ.

Six of the CS items showed increases over the freshman year. One item (180), which concerns enjoyment of discussion of philosophies of history, showed a decrease. This item also showed weak loadings on the cultural sophistication factors for both males and females. The reports of increased attendance at lectures (197), reading of Joyce, Tolstoy, and Mann (187), and knowledge of painting (196), and ownership of books may have resulted directly from either classroom instruction or the increased opportunities for such behaviors on a college campus. The changes need not reflect general changes in attitude or increased in cultural sophistication, per se. In other words, these changes in self report behavior may have resulted directly from

new environmental presses, rather than from modified attitudes. On the other hand, actual modifications of culturally related attitudes and interests do appear to be directly reflected in the students' increased reports that they were interested in modern art (184) and that they had reacted to art with deep personal feeling (199). It is interesting to note that item 190 from the CS Scale, which concerns enjoyment of classical music, did not show a change, whereas 195, which concerns enjoyment of poetry, showed only a very slight increase of borderline significance. It is not surprising that item 183, concerning discussion of foreign films, did not increase, since relatively few foreign films are shown in the cities in which these campuses are located.

School, Sex, and Individual Difference Variables Related to the Extent of Attitude Change

In order to determine whether the overall scores on the five attitude scales changed differentially among males and females at the four coeducational schools, the data were analyzed with multivariate analysis of covariance. Sex and school were the two factors in the 2 x 4 factoral design; post-scores on the five attitude scales were the dependent variables; and the pre-scores on the five attitude scales were the multiple covariates. The results of the univariate and multivariate tests are presented in Table 6. The multivariate tests indicated that there were significant differences among the schools and sexes, but there was no significant school and sex interaction. The univariate tests indicated that schools accounted for significant variance on the FI, L, and CS Scales, and sex accounted for significant variance on the FI, PI, and SC Scales.

Figure 1 graphically presents the mean pre- and post-scores on FI, L, and CS, separately for the four colleges. With respect to these scales, on which there were significant differences due to schools, it may be noted that College B, which is privately supported, showed the smallest increase. On the L Scale, Schools B and C, which are privately supported, showed substantial gains, whereas Schools A and D, which are publicly supported, showed little or no gains. On the CS Scale,

Schools B, C, and D showed substantially larger gains than School A, which is publicly supported and the largest among the four schools.

Figure 2 graphically presents the mean pre- and post-scores on the five dependent variables separately for males and females attending the coeducational colleges. With respect to the scales on which there appeared to be significant differences due to sex, it may be noted that males revealed slightly greater increases on the FI and PI Scales. On the other hand, there were apparently no increases in SC for either sex. The significant F's may have resulted at least in part because of the large pre-test sex differences, which violate the assumptions of ANCOVA; hence the post-scores were not adequately adjusted.

In order to determine whether the changes on the attitude scale increased differentially in relation to various other individual variables besides sex and the school attended, items from the "Secondary School" and "Family Background" sections of CSQ 1 and from the "College Activities" section of CSQ 2 were intercorrelated with the pre- and post-scores on the attitude scales. The correlation coefficients were subjected to multiple regression analyses to determine which of the individual items improved the predictions of the post-scores significantly beyond the predictions from the pre-scores. A stepwise regression procedure was used in which given attitude post-score was the dependent variable and the corresponding pre-score was the first variable entered. Only the larger sample of students from the four coeducational schools was used for these analyses because of the large number of variables treated.

Only the FI and CS Scales were included in the multiple regression analyses, because on the basis of the prior findings it was determined that pre- post model for the multiple regression was not appropriate with respect to PI, L, and SC data for these colleges. First, the L Scale was not included in the analyses because of the low internal consistency of the scale. The low reliability would necessarily attenuate all correlations involving the pre- and post-scores on this scale, as was

demonstrated with respect to the correlation between the pre- and post-scores themselves. Second, the PI and SC Scales were not included in the regression analyses because the prior analyses revealed only small overall gains on these scales. Since the gains were so small, it did not seem appropriate to ask whether any variables related differentially to the gains. On the other hand, the FI and CS Scales did reveal overall attitude changes, and the scales were at least moderately reliable, so the multiple regression model did seem appropriate. Nevertheless, it should be kept in mind that these scales were not highly reliable, that the analyses were exploratory, and the findings and interpretations must be regarded as tentative.

Tables 7, 8, and 9 present the results of the regression analyses, including the Multiple R's; the squares of the R's (indicating the total variance accounted for); the successive changes in the squares of the R's (indicating the additional variance accounted for by each item); the betas (indicating the direction of the relationships as well as the relative weights in the prediction formulae); and the F values (indicating the significance of the contributions of each variable in the final regression equation). The tables include only those items which contributed at least one percent to the variance on the dependent variable, i.e. which added at least .01 to the R^2.

Based upon this criterion, no CSQ 1 item contributed to the predictions of the FI Post-scores. Table 7 presents two CSQ 1 items which contributed to the equation for predicting the CS Post-score. The relationships suggest that cultural sophistication gains during the freshman year were somewhat greater for students who reported that they liked assignments requiring original research, and for students who said they would react negatively to cheating by other students.

With reference to CSQ 2 College Activities items from CSQ 2, which were administered at the end of the freshman year, Table 8 reveals only one item which contributed somewhat to the predictions of FI Post-scores. The direction of the relationship suggests that FI Post-scores increased slightly more for students who

were relatively negative in their feelings about campus policies on attendance, cuts, etc.

Table 9 reveals five CSQ 2 College Activities items which contributed to the predictions of the CS Post-scores. These post-scores tended to be slightly higher among students who reported that at least several faculty members had provided personal evaluations of their work, that they had been involved in school spirit activities, that they had been interested in student government, that they had read course-related material that had not specifically been assigned, and that they had little difficulty in writing papers. This pattern suggests that those students who increased most in Cultural Sophistication had participated more in certain campus activities, that they had related closely to certain individual faculty members, and that they enjoyed and mastered at least certain aspects of their academic work.

Further analyses of the relationships of CS gain scores with extracurricular involvement and faculty-student relationships were computed. These data are shown in Table 10. The data show that students with higher extracurricular involvements gained nearly twice as much from the pre- to the post-scores and the students with closer relationships to faculty members gained more than three times as much as the students with more distant relationships to faculty members.

Summary

The study was conducted to evaluate the CSQ attitude scales in terms of their suitability for research with black students and if the scales were determined to be at least minimally suitable, to determine the nature and extent of general and specific attitude changes among students attending predominantly black colleges. In addition, the study examined college and sex differences and other individual differences in relation to changes among certain general attitudes.

With regard to the methodological issues, the results of the study indicated that the CSQ attitude scales, with the exception of the L Scale, were about as reliable (internally consistent) for the samples of black students as they were for

the predominantly white samples of students used in standardization of the scales. The L Scale was not suitably reliable, in that the items appeared to be only weakly related to one another. It is recommended that this scale should be revised or used only with caution in studies involving black students, especially when the L Scale scores are treated with correlational techniques. Correlations involving these scores will tend to be attenuated, and furthermore, measures on this scale are not readily interpretable in terms of a general, undimensional attitude variable.

Although the PI Scale was internally consistent, at least to a moderate degree, it should be noted that this scale was differentiated into at least two distinct dimensions by the factor analyses. One of the factors reflected a dimensions of affilitative interests and behaviors, while the other factor reflected independence of peers with regard to opinions and decisions. Further study will be necessary to clearly conceptualize these aspects of peer indipendence; meanwhile, it is important to note that the PI Scale may reflect multi-dimensional phenomena.

The items comprising the other three CSQ attitude scales, Family Independence, Social Conscience, and Cultural Sophistication formed distinguished factors, as well as internally consistent scales. However, certain items were noted to be generally unrelated to the respective scales, suggesting that the particular items may be invalid indices on these particular scales for black students.

With regard to the substantive hypotheses, the study provided evidence that Family Independence, Peer Independence, Liberalism, Social Conscience, and Cultural Sophistication were developing, at least in certain respects, during the first year or two at college.

In general, Family Independence increased, at least to some degree, within four of the five schools. Moreover, there was a tendency towards slightly greater FI increases among students who felt that campus policies concerning class attendance, cuts, etc. were inappropriate. This might indicate the growth of independence from the family is associated with questioning and perhaps rebelious reactions towards

college administrative regulations which seem arbitrary, authortarian, or even paternalistic.

The Peer Independence Scale revealed statistically significant but slight overall gains among the students. Males may have increased slightly more than females. Examination of changes among the individual PI items suggested that independence of opinion or "point of view" was increasing, but there were no corresponding changes in other aspects of independence, i.e. affiliation and interest in the peer groups.

Liberalism showed increases among the students, but the gains were substantially greater for the private colleges. Although the sample of public vs. private schools in this study is too small to generalize to other predominantly black colleges, one might speculate that the private schools are under less external constraint than the public colleges, which must, of course, depend upon conservative state legislatures for appropriations. The particular changes among the Liberalism items suggest that students develop more liberal or tolerant attitudes towards crime and punishment, i.e. they oppose government control over public assembly, police searches without warrants, capital punishment. They also feel increasingly by that conscientions objectors should be excused from military service and they tend to view labor unions more positively.

There were no significant overall increases in Social Conscience, but it is important to note that four of the ten SC items did increase, while two decreased. The increases concerned the rights of non-WASP's, the occurance of lynching, the dropping of the atomic bomb on Hiroshima, and price rigging in industry. The increases on these items were partially balanced by corresponding decreases on two other SC items, one concerning the needs of the elderly, the other representing lessening of reaction to the sight of children looking at obscene material. The overall pattern of item changes suggests that the students are growing more concerned about rights of minority groups, exploitation of individuals, and war, whereas the increase in tolerance for obscenity may be part of increasingly liberal attitudes towards crime and social deviance.

The most substantial attitude changes were revealed in Cultural Sophistication. Six of the ten items increased significantly during the freshman year. Although some of the changes may have been due to the increased opportunities for attending cultural events, for exposure to the classics, etc. the changes also reflect increased cultural interests, particularly towards art. It should also be noted that Cultural Sophistication increased at only four of the five schools. Moreover, the CS gains were greater for students who reported that they had experienced close personal relations with faculty for students who reported they had been quite involved in certain extracurricular activities.

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TABLE 1

Reliability Estimates (Alpha Coefficients) for
Five CSQ Attitude Scales for Freshmen Entering Predominantly Black Colleges

Scale	Alpha Coefficient
Family Independence	.71
Peer Independence	.62
Liberalism	.44
Social Conscience	.65
Cultural Sophistication	.69

TABLE 2

Pre- and Post-Score Correlations for Five CSQ Attitude Scales for Freshmen Attending Predominantly Black Colleges
(Nine month interval between pre- and post-measures)

Scale	Correlation
Family Independence	.66
Peer Independence	.51
Liberalism	.34
Social Conscience	.57
Cultural Sophistication	.59

TABLE 3

Comparisons of Pre- and Post-Scores on Attitude Scales for Freshmen Attending Predominantly Black, Coeducational Colleges

Scale	N	Pre-Score	Post Score	Difference	t
Family Independence	1276	18.7	19.3	.6	5.4***
Peer Independence	1261	22.7	23.0	.3	2.5**
Liberalism	1180	26.7	27.2	.5	3.9***
Social Conscience	1229	27.4	27.6	.2	1.1
Cultural Sophistication	1272	21.5	22.4	.9	7.7***

**p<.01, one-tailed test
***p<.001, one-tailed test

TABLE 4

Comparisons of Pre- and Post-Scores on Attitude Scales for Sophomores attending a Predominantly Black, All-Girl College

Scale	N	Pre-Score	Post-Score	Difference	t
Family Independence	244	19.4	20.4	1.0	3.8***
Peer Independence	246	23.4	24.3	.9	3.2***
Liberalism	208	27.5	28.8	1.3	4.2***
Social Conscience	231	30.2	30.5	.3	1.2
Cultural Sophistication	246	22.9	24.3	1.4	5.1***

***p<.001

TABLE 5

Items Showing Significant Changes within CSQ Attitude Scales for Freshmen Attending Four Predominantly Black Schools
$1293 \geq N \geq 1138$

Scale and Item Abstract	Pre-Score	Post-Score	t
Family Independence			
148. How often (do you plan to see) have you seen your parents? (1=frequently; 4=infrequently).	2.8	2.7	4.9***
149. Could you become absorbed in activity, lose interest in family? (1=no; 4=yes).	1.3	1.4	2.8**
150. Are a family's need more important than an individual's needs? (1=agree; 4=disagree).	1.8	1.9	4.4***
153. How important is it that you satisfy your parents' wishes? (1=important; 4=unimportant).	1.4	1.5	3.3**
154. Have you been growing closer to your family? (1=closer; 4=further away).	1.8	1.9	4.1***
157. How independent of your parents do you consider yourself to be? (1=dependent; 4=independent).	2.0	2.1	4.9***
Peer Independence			
162. Do you maintain a view despite other students losing patience? (1=rarely; 4=often).	2.4	2.6	5.1***
164. Do you do things your own way without regard to other students? (1=no; 4=yes).	2.1	2.2	3.2**
166. Could you become absorbed, lose interest in friends? (1=no; 4=yes).	2.3	2.2	3.0**
Liberalism			
173. Should government prevent certain groups from holding meetings? (1=agree; 4=disagree).	2.7	2.8	2.9**
176. Are police unduly hampered when they have to have a search warrant? (1=agree; 4=disagree).	2.5	2.6	3.0**
179. Do you agree that capital punishment should be abolished? (1=agree; 4=disagree).	2.8	2.9	2.8**

TABLE 5 (Contd.)

Scale and Items	Pre-Score	Post-Score	t
Liberalism			
188. Do labor unions do the country more harm than good? (1=agree; 4=disagree).	2.6	2.7	3.6***
192. Should conscientious objectors be excused from military service? (1=disagree; 4=agree).	2.6	2.7	2.9**
Social Conscience			
177. Are you concerned that non-WASP's have less opportunity in America? (1=no; 4=yes).	2.7	2.9	4.6***
181. Are you concerned that elderly are left alone, on "crumbs of welfare"? (1=no; 4=yes).	3.4	3.3	3.0**
186. Would you be upset seeing children looking at obscene material? (1=no; 4=yes).	2.5	2.3	5.1***
189. Was decision to drop atomic bomb on Hiroshima right? (1=right; 4=wrong).	2.5	2.6	2.6**
191. Are you disturbed when you hear of price rigging in industry? (1=no; 4=yes).	2.4	2.5	3.8***
193. How do you feel when you hear about lynching? (1=indifferent; 4=outraged).	2.9	3.0	3.1**
Cultural Sophistication			
180. Do you enjoy discussions of philosophies of history? (1=no; 4=yes).	2.8	2.7	3.1**
184. How interested are you in modern art? (1=no interest; 4=high interest).	2.1	2.3	6.0***
187. Have you read Joyce, Tolstoy, Mann? (1=none; 4=all).	1.5	1.7	7.2***
196. How much do you know about the history of painting? (1=nothing; 4=good deal).	1.7	1.9	6.5***
197. How often have you gone to a serious lecture (non-class)? (1=never; 4=five or more).	1.9	2.2	11.7***

TABLE 5 (Contd.)

Scale and Items	Pre-Score	Post-Score	t
Cultural Sophistication			
198. How many books do you own (excluding texts)? (1=less than 10; 4=more than 75).	1.8	1.9	5.2***
199. Have you reacted to work of art with deep personal feelings? (1=no; 4=yes, several times).	2.4	2.5	3.3**

**p<.01, two tailed test.
***p<.001, two tailed test.

TABLE 6

Univariate And Multivariate F Values From MANOVA Of Five Attitude Scales

SOURCE	df	FAMILY INDEPENDENCE	PEER INDEPENDENCE	LIBERALISM	SOCIAL CONSCIENCE	CULTURAL SOPHISTICATION	MULTIVARIATE F	df
School	3, 1132	2.9*	1.6	3.2*	2.3	11.0***	4.2***	15, 3330
Sex	1,1132	4.5	7.7**	.0	4.1*	1.2	3.0*	5, 1128
School x Sex	3,1132	.2	1.0	.2	.2	1.8	.7	15, 3380

*p<.05

**p<.01

***p<.001

TABLE 7

Multiple Regression of CSQ 1 Items and Cultural Sophistication Pre-Scores with Cultural Sophistication Post-Scores (N=725)

Variable	Multiple R	R^2	R^2 Change	Beta	F
Cultural Sophistication Pre-Score	.528	.279	.279	.48	224.1***
144. Do you like assignments requiring original research? (dislike=1; like=2).	.553	.306	.028	.15	22.8***
139. What would be your probable reaction to a cheating student? (not disturbed=1; report student=6).	.563	.317	.010	.11	10.9***

***p<.001

TABLE 8

Multiple Regression of CSQ 2 College Activities Items and Family Independence Pre-Scores with Family Independence Post Scores (N=751)

Variable	Multiple R	R^2	R^2 Change	Beta	F
Family Independence Pre-Score	.667	.445	.445	.65	568.7***
84. How do you feel about campus policies concerning attendance, cuts? (inappropriate=1; appropriate=4).	.676	.456	.012	-.11	16.0***

***p <.001

TABLE 9

Multiple Regression of CSQ 2 College Activities Items and Cultural Sophistication Pre-Scores with Cultural Sophistication Post-Scores (N=751)

Variable	Multiple R	R^2	R^2 Change	Beta	F
Cultural Sophistication Pre-Score	.482	.233	.233	.35	117.1***
61. How many faculty have provided personal evaluations? (none=1; more than 3=4).	.510	.260	.027	.13	16.8***
40. How involved have you been in school spirit activities? (not at all=1; extensively=4).	.532	.284	.024	.14	20.3***
54. How interested are you in student government? (not interested=1; very interested=4).	.550	.302	.018	.13	18.8***
99. How much have you read course related material, not assigned? (little=1; much=4).	.564	.318	.016	.13	17.0***
82. Do you find writing papers difficult? (very difficult=1; no difficulty=4).	.577	.333	.014	.13	16.1***

***p<.001

TABLE 10

Cultural Sophistication Scores in Relation to
Extracurricular Involvements and Faculty-Student Relationships

Cultural Sophistication Scores

		Pre	Post	Difference
Extracurricular Involvements				
Low	(N=516)	20.4	21.0	+ .6
High	(N=1002)	22.5	23.6	+1.1
Faculty-Student Relationships				
Low	(N=744)	20.9	21.4	+ .4
High	(N=744)	22.5	24.0	+1.5

Figure 1

Comparisons of Pre- and Post-Scores on Family Independence, Liberalism, and Cultural Sophistication for Freshmen Attending Four Predominantly Black, Coeducational Colleges

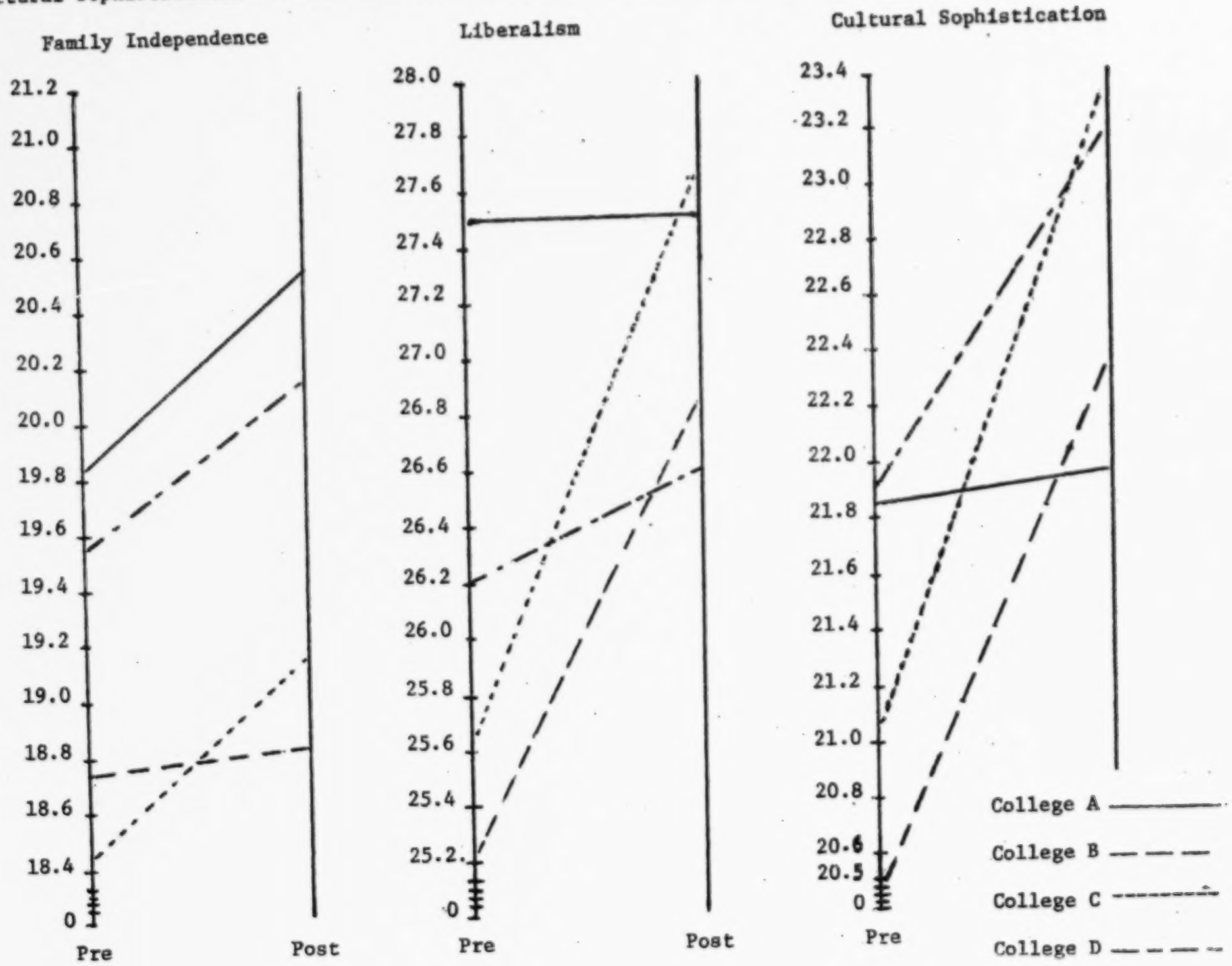

Figure 2

Comparisons of Pre- and Post-Scores on Family Independence, Peer Independence, and Social Conscience for Males and Females attending Predominantly Black, Coeducational Colleges